

**REMARKS**

Claims 1 and 3-33 are pending in this application. Applicant appreciates the Office Action's indication that claims 4-14 and 24-31 contain allowable subject matter.

By this Amendment, claims 1 and 22 are amended for better clarity. See specification at, for example, Fig. 1a. Claims 3, 7, 9-15, 23-25, 27 and 29-31 are amended in view of the amendments made to claims 1 and 22.

Reconsideration of the application is respectfully requested.

The Office Action rejects claims 1, 3, 15-23, 32 and 33 under 35 U.S.C. §103(a) over U.S. Patent No. 6,045,756 to Carr et al. ("Carr") in view of U.S. Patent No. 5,650,123 to Saini et al. ("Saini"). This rejection is respectfully traversed.

**I. Carr Does Not Disclose or Suggest Fixing By An Adhesive or Bonding**

The Office Action asserts that Carr discloses elements that are "affixed" to the upper surface 18 of a platform 12. See Fig. 1 and col. 3, lines 42-61 of Carr. The Office Action asserts that the term "affixed" discloses fixing by an adhesive.

However, Carr's "affixed" does not disclose the use of an adhesive. In particular, Carr discloses, at col. 3, lines 51-53, "affixed to the upper surface 18 of the platform 12 are the various sensor components including light source 20, wave-guides 22 and 24, and detectors 26 and 28." Carr's wave-guides 22 and 24 do not directly touch substrate 12. See Fig. 1. Instead, wave-guides 22 and 24 are disposed on the substrate 12 via cast 30. Apparently, wave-guides 22 and 24 cannot be fixed on the substrate 12 by an adhesive, because cast 30 is located between the wave-guides 22 and 24 and the substrates 12.

In view of the above, the term "affixed" of Carr is too general to require the use of an adhesive. "Affixed" does not necessarily lead to the use of an adhesive because it also encompasses the situation where a cast is inserted therebetween. Therefore, Carr does not inherently disclose "fixed on the substrate by an adhesive," as recited in claim 1.

For similar reasons, Carr does not inherently disclose "bonding," as recited in claim 22.

Saini does not supply the subject matter lacking in Carr. Thus, Carr and Saini, either individually or in combination, do not disclose or suggest the subject matter recited in claims 1 and 22, and claims 3, 15-21, 23, 32 and 33 depending therefrom.

**II. One of Ordinary Skill Would Not Have Been Motivated to Combine Carr and Saini**

The Office Action recognizes that Carr's wave-guide 22 does not cover a part of light source 20 or detectors 26 and 28. (See Fig. 1 and col. 3, lines 51-62 of Carr.) Thus, the Office Action recognizes that Carr does not disclose "the optical wave-guide being formed on the substrate to cover a part of the first element and a part of the second element," as recited in claim 1.

However, the Office Action asserts that Saini's wave-guide 20 covers light source 14 and detectors 16 and 18. The Office Action asserts that one of ordinary skill in the art would have been motivated to combine Saini with Carr so that the wave-guide covers the light source and the detectors for "better coupling."

However, one of ordinary skill in the art would not have been motivated to combine Carr with Saini. Carr discloses in Fig. 1 that the wave-guides 22 and 24 are separated from light source 20 and detectors 26 and 28 by parts of cast 30. Furthermore, Carr discloses in Fig. 3 that triangular shaped reflecting fixtures 64 and 66 are needed to separate wave-guide 58 from light source 60 and detector 62. Carr clearly indicates that triangular shaped reflecting fixtures 64 and 66 are used for achieving a uniform dispersement of light across the light wave-guide surface thereby improving the coupling characteristics of light from light source 60 to the detector 62. See col. 5, lines 5-17. Based on our review, Carr requires coupling means, such as the triangular shaped reflecting fixtures 64 and 66, between

the wave-guide 58 and the light source 60 or detector 62. Thus, Carr teaches away from a configuration in which the wave-guide covers the light source or the detector. In particular, Carr teaches away from a configuration in which the wave-guide contacts the light source and the detector. Thus, Carr teaches away from "the optical wave-guide contacting the part of the first element and the part of the second element," as recited in claims 1 and 22. Hence, one of ordinary skill in the art would not have been motivated to combine Saini's "direct coupling" into Carr's device, because such a "direct coupling" would defeat Carr's use of the triangular shaped reflecting fixtures 64 and 66 to achieve "uniform dispersement of light."

In view of the above, the Office Action fails to establish a *prima facie* case of obviousness, because the Office Action fails to establish a motivation for combining Carr and Saini.

### **III. Conclusion**

For any or all of the above reasons, withdrawal of the rejection of claims 1, 3, 15-23, 32 and 33 under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 3-33 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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